Raj Garkhedkar

Huntsville, Alabama * www.linkedin.com/in/rajgark

IMMEDIATE OBJECTIVE

Physicist & Data Scientist. Passionate about applying myself and my academic knowledge to fuel innovation. Particularly interested in applying physical/mathematical/statistical insight machine learning applications for the latest and coolest technologies. In the physical domain, I am trained in optics/photonics.

PROJECT & PROFESSIONAL EXPERIENCE

DATA SCIENTIST *COLSA Corporation, Huntsville, AL*

January 2022

- SciML – creating mission ready and rigorous AI systems.
- Optimization of lab infrastructure – implementing Prometheus, Kubernetes, and Docker for streamlining the entire ML pipeline tailored to our specific needs and security protocols.

MACHINE LEARNING ENGINEER INTERN *COLSA Corporation, Huntsville, AL*

Summer 2021

- SciML – dimensionality reductions/transforms, nonlinear dynamics & control theory implementation. Used Python & Julia for signal processing & noise analysis
- Sparse Identification of Nonlinear Dynamical systems (SINDy) modeling and optimization work through PySINDy – algorithmic discovery of differential equations that model nonlinear systems through fundamental governing principles (Lorenz 63 & Korteweg-De Vries Equation)
- Algorithm development through the mathematical construct behind neural networks to tailor activation functions, loss functions, and network layers through modeling ordinary/partial differential equations, linear algebra, abstract algebra, & data structures

DATA ENGINEERING INTERN *Enkon Energy Advisors, Houston, TX*

Summer 2019 and Summer 2020

- Used Python to create web scraper script, to capture daily NGL flows from various pipelines throughout the country at their receipt/delivery points. The web-scraped data is automatically appended to our databases thus fully automating the data collection behind consulting projects.
- Wrote an article, published in Enkon's monthly newsletter, on the Current State of Liquefied Natural Gas where I examined the headwinds and drivers that guided the first and second wave of LNG Projects and global exports, also examined the global supply and demand.
- Completed with over 4000 lines of Python code with my own helper functions to ease analytics.

ROBOTICIST *Illinois Wesleyan Univ., Bloomington, IL*

Fall 2020 and Spring 2021

- Designing and building a robot modeled after the Boston Dynamics dog, controlled via a PlayStation controller. All CAD and programming work done independently by my team.
- This work will be presented at a research conference in April.